

**PRE-DESIGN INVESTIGATION WORK PLAN
ARKEMA PROJECT AREA**

**APPENDIX C
SITE HEALTH AND SAFETY PLAN**

ADDENDUM 1

SITE-SPECIFIC HEALTH AND SAFETY PLAN ADDENDUM 1 APPROVAL


This site-specific health and safety plan (HASP) addendum has been reviewed and approved for riverbank soil sampling at the Arkema Project Area in Portland, Oregon. **This HASP addendum does not cover any diving activities, subcontractor construction, or confined space entry activities.**



Project manager

7/15/2021

Date



Corporate health and safety manager

7/15/2021

Date

Introduction

This addendum provides modifications to the site-specific Health and Safety Plan (HASP) dated December 18, 2020, which is Appendix C of the Pre-Design Investigation (PDI) Work Plan for the Arkema Project Area. The modifications were made to address the following for riverbank soil sampling:

- Respirator use. Respirators will be used to protect workers from potential asbestos fibers in riverbank soil on Lots 1 and 2.
- Heat stress. Personal protective equipment (PPE) will be modified to reduce heat stress for the field staff.
- COVID-19 protocols. The COVID-19 protocols will be modified for consistency with recent guidelines from Oregon's Governor and Oregon Occupational Safety and Health Administration (Oregon OSHA).

The following sections describe the modifications and rationale.

Respirator Use

The riverbank soil near Lots 1 and 2 could have asbestos waste from the rebuilding of diaphragm cells on other portions of the site. As noted in Section 6.10 of the HASP, air monitoring for asbestos will be performed onsite by a third party professional during riverbank sampling to understand any potential threat of airborne asbestos particles.

The riverbank soils will be wetted down with distilled water to reduce or eliminate airborne dust. As a precaution, respirators will be donned in the exclusion/contaminant reduction zone until at least one shift of asbestos air monitoring data shows the fibers per cubic centimeter are below the U.S. Environmental Protection Agency clearance criteria and the Oregon OSHA permissible exposure limit.

A half-face respirator with P100 cartridges will be used. The change-out schedule for the cartridges is daily or when breathing becomes difficult, whichever occurs first. All field staff donning respirators will have current fit-test certification.

Heat Stress

The riverbank soil sampling work is scheduled for July 20 through 23, which is anticipated to be in the middle to upper 80°F range. In addition, field staff in the exclusion/contaminant reduction zones will be donning half-face respirators for at least

part of the riverbank soil sampling event. Heat stress will be a significant health and safety hazard while conducting the riverbank soil sampling.

The PPE specified for the riverbank soil sampling is Level MD and consists of the following:

Long pants and shirt or coveralls, American National Standards Institute Class II high-visibility vests or jackets, hard hat, latex or nitrile gloves under work gloves, eye protection, chemical-protective foot ware (e.g., rubber steel-toed boots or leather steel-toed boots with chemically protective boot covers), chemical protective coveralls (coated Tyvek) or rain slicks. Hearing protection and safety goggles are required as needed.

The following modifications will be made to the PPE for riverbank soil sampling to reduce heat stress:

1. **Short-sleeved shirts may be worn.** The riverbank soils will be slightly damp to moist and will not pose a splashing hazard. Care will be taken when decontaminating field equipment to avoid splashing.
2. **Hard hats will be donned only if an overhead hazard is present.** The use of a hand-auger or post hole digger will not create an overhead hazard. The impact corer system will require the use of an impact driver or fence post driver at shoulder level. A hard hat with chin-strap will be donned while collecting soil samples with the impact corer system.
3. **Chemical protective footwear and coveralls are not required.** Chemical protective footwear and coveralls will significantly increase heat stress because the materials used in them (e.g., rubber and coated Tyvek) retain heat and do not breathe. The riverbank soils will be slightly damp to moist and will not pose a splashing hazard. Care will be taken when decontaminating field equipment to avoid splashing, so chemical protective PPE is not necessary. Steel-toed and puncture resistant (e.g., steel shank) leather boots are recommended given the uneven nature of the riverbank materials, which includes concrete with rebar.

COVID-19 Protocols

Oregon OSHA removed the face covering and distancing requirements from the COVID-19 rule on June 30, 2021. Wearing face coverings and 6 ft physical distancing are optional for the riverbank soil sampling.